REMARKS

Claims 1, 2, 6, 8 to 12, 16 to 19, 21, 25, 26, 28, 30, and 35 to 37 are pending in the application. No claims have been amended, canceled, or added, herein. Applicants respectfully request reconsideration of the requirements for restriction and election of species in view of the following remarks.

Restriction Requirement

The Office requires applicants to restrict the claimed subject matter to one of two groups of inventions under 35 U.S.C. §§ 121 and 372. The claims of each group, and the subject matter associated with each group, are set forth below.

Group	Claims	Subject Matter
I	1, 2, 6, 8 to 12, 16 to 19, 21, 25, 26, 28, 30, and 37	A nucleic acid molecule comprising a sequence encoding a cytoplasmic signaling molecule that comprises at least two cytoplasmic signaling sequences, wherein at least one of the cytoplasmic signaling sequences is derived from CD 134 or the human inducible co-stimulator, and a composition comprising the nucleic acid molecule and a pharmaceutically acceptable excipient.
II	35 and 36	A method of treating HIV infection, asthma, eczema, cystic fibrosis, sickle cell anemia, psoriasis, multiple sclerosis, organ transplant rejection, graft-versus-host disease, diabetes, or cancer comprising administering to a patient suffering from such a disease or disorder a therapeutically effective amount of a nucleic acid molecule of group I or a chimeric receptor protein comprising an extracellular ligand-binding domain, a transmembrane domain, and a cytoplasmic signaling domain encoded by the nucleic acid molecule of group I.

The Office asserts that the subject matter of groups I and II does not relate to a single general inventive concept under PCT Rule 13.1 because the subject matter lacks the same or corresponding technical feature under PCT Rule 13.2 that defines a contribution over the prior art. Applicants respectfully traverse the restriction requirement because the technical feature that links groups I and II does, in fact, define a contribution over the prior art.

The Office asserts that the technical feature that links groups I and II is a cytoplasmic signaling sequence derived from CD134 or the human inducible co-stimulator (ICOS), and

further asserts that this feature is shown in the prior art, citing Arch, *et al.*, *Mol. Cell Biol.*, 1998, 18(1), 558-565 ("the Arch article") and Parry, *et al.*, *J. Immunol.*, 2003, 171(1), 166-174 ("the Parry article"). In contrast to the Office's assertion, the technical feature that links groups I and II is not a cytoplasmic signaling sequence derived from CD134 or the human inducible co-stimulator (ICOS), but, rather, is ***a cytoplasmic signaling molecule that comprises at least two cytoplasmic signaling sequences***, at least one of which is derived from CD134 or the human inducible co-stimulator. This technical feature is not taught or suggested in either the Arch or Parry articles. For example, the Arch article describes experiments in which yeast two-hybrid screens were performed with the cytoplasmic domains of 4-1BB and OX40 (CD134) to gain insight into the signaling pathways employed by these factors. Both domains were found to bind TRAF proteins, and further experiments were performed to define the elements in the cytoplsamic domains of both receptors that mediate the interactions with the TRAF proteins. The article does not describe or suggest a cytoplasmic signaling molecule that comprises at least two cytoplasmic signaling sequences.

The Parry article also does not teach or suggest cytoplasmic signaling molecules that comprise at least two cytoplasmic signaling sequences. The article describes experiments in which the abilities of CD128 or inducible costimulatory protein to activate the signal transduction cascades implicated in the regulation of IL-2 were compared.

Notably, the Arch and Parry articles thus fail to teach or suggest a cytoplasmic signaling molecule comprising at least two cytoplasmic signaling sequences, at least one of which is derived from CD134 or the human inducible co-stimulator. This technical feature, which links groups I and II, thus defines a contribution over the prior art and is therefore a special technical feature. Accordingly, the subject matter of groups I and II relates to a single general inventive concept as defined in PCT Rule 13.2, and restriction of the subject matter of these groups is therefore improper.

Nevertheless, in accordance with 37 C.F.R. § 1.499, Applicants hereby elect the subject matter of group I for prosecution on the merits, directed to a nucleic acid molecule comprising a sequence encoding a cytoplasmic signaling molecule that comprises at least two cytoplasmic signaling sequences, wherein at least one of the cytoplasmic signaling sequences is derived from CD 134 or the human inducible co-stimulator, and a composition comprising

the nucleic acid molecule and a pharmaceutically acceptable excipient, and encompassing claims 1, 2, 6, 8 to 12, 16 to 19, 21, 25, 26, 28, 30, and 37.

Election of Species Requirement

The Office requires Applicants to elect a single species of cytoplasmic signaling sequence, asserting that the species CD134 and human inducible co-stimulator are independent or distinct because they are different species of signaling molecules required for costimulation involved in activation of resting T cells. In accordance with 37 CFR § 1.146, Applicants hereby provisionally elect human inducible co-stimulator. Claims 1, 2, 6, 8 to 12, 16 to 19, 21, 25, 26, 28, 30, and 35 to 37 read on the elected species.

It is Applicants' understanding that this election is being made solely to aid the Examiner in conducting an initial search and examination of the claimed subject matter, and is not to be construed as limiting the scope of Applicants' claims. It is Applicants' further understanding that, if the elected species is found to be allowable over the prior art, the search and examination will be expanded to cover additional species, until the examination includes the full scope of the subject matter elected in response to the restriction requirement.

Conclusion

Applicants believe that the foregoing constitutes a complete and full response to the Office Action of record. Accordingly, an early and favorable action is respectfully requested.

Respectfully submitted,

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